

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: AUG 06 1993

SUBJECT: ON-SCENE COORDINATOR'S REPORT - Removal Action at the
S. E. Rockford Site, Rockford, Illinois (Site ID# DK)

FROM: Richard Karl, Acting Chief *R. Karl*
Emergency and Enforcement Response Branch, HSE-5J

TO: Debbie Dietrich, Acting Director
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THRU: Jodi Traub, Acting Associate Division Director *Jodi Traub*
Office of Superfund, HS-6J

Attached please find the On-Scene Coordinator's Report for the removal action conducted at the S. E. Rockford site located in Rockford, Illinois. The report follows the format outlined in the National Contingency Plan (NCP), Section 300.165. This removal began on October 3, 1989, and was completed on December 1, 1990. The OSC for the removal action was Ken Theisen.

The site posed an immediate threat to human health. The action was taken to eliminate threats posed by contaminated groundwater found in residential wells. The contaminants found at the site were trichloroethylene 1-1-1 trichloroethane, vinyl chloride.

Costs under control of the On-Scene Coordinator totaled \$1,916,379.95 of which \$1,887,893.66 were for the Emergency Response Cleanup Services (ERCS) contractor.

Any indication in this OSC Report of specific costs incurred at the site is only an approximation, subject to audit and final definitization by the U.S. EPA. The OSC Report is not a final reconciliation of the costs associated with a particular site.

Portions of the OSC report appendices may contain confidential business or enforcement-sensitive information and must be reviewed by the Office of Regional Counsel prior to release to the public.

This site is on the National Priorities List.

Attachment

ON-SCENE COORDINATOR'S REPORT

CERCLA REMOVAL ACTION

S. E. ROCKFORD

ROCKFORD, ILLINOIS

SITE ID # = DK

DELIVERY ORDER NO.7360-05-132

Removal Dates: 10-03-89 to 12-01-90

**Emergency and Enforcement Response Branch
Office of Superfund
Waste Management Division
Region V
United States Environmental Protection Agency**

US 00324

EXECUTIVE SUMMARY

Site/Location: S.E. ROCKFORD SITE, ROCKFORD, ILLINOIS
Removal Dates:

INCIDENT DESCRIPTION:

The Emergency Response Section of the U. S. Environmental Protection Agency (U. S. EPA), Region V, initiated a removal at the S. E. Rockford site in Rockford, Illinois on October 3, 1989. This removal mitigated the threats to human health typically posed by residents ingesting and inhaling the vapors from contaminated groundwater found in their private wells. The chemicals found in the wells were various volatile organic compounds, including trichloroethene (TCE), both the cis and trans isomers of 1,2-dichloroethene, vinyl chloride and others. The three chemicals mentioned were found in amounts above the various levels referred to as RAL'S or Removal Action Levels. These levels are set by the Office of Drinking Water in Washington D. C. and are the levels above which an Emergency Response Action can be initiated.

Under U. S. EPA guidance, the Emergency Response Cleanup Services (ERCS) contractor, I. T. Corporation, designed, engineered and subcontracted the installation of 19,143 feet of water supply main, connected 283 homes and businesses to the city water system and abandoned 260 private wells. All actions taken were consistent with the National Contingency Plan.

Kenneth Theisen, the U. S. EPA On-Scene Coordinator (OSC) for the project, completed this large construction project before the construction season ended, thus assuring the affected residents a safe water supply for the first time in many years.

The removal was completed on December 1, 1990, at a cost under the control of the OSC of \$1,916,379.95, which includes \$1,887,893.66 for the ERCS contractor.

Kenneth M Theisen
Kenneth Theisen, On-Scene Coordinator
Emergency and Enforcement Response Branch
United States Environmental Protection Agency
Region V

4-15-93
Date

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1.0 SUMMARY OF EVENTS

1.1 INITIAL SITUATION

The S. E. Rockford site, located in Rockford, Illinois consists of an area of approximately two square miles and was initially bounded by Harrison Street to the North, 24th Street to the East, Sandy Hollow Road on the South, and 8th Street to the West. The area is residential in nature with thousands of homes in this area. There is an area of commercial use along a main North/South artery (11th Street). The area consists of "islands" of county surrounded by city, and as a result no city water is present in much of the area.

This area was found to contain concentrations of various volatile organic compounds in residential wells above the levels set by the United States Environmental Protection Agency's (U. S. EPA) Office of Drinking Water. The compounds include both cis and trans 1,2-dichloroethene along with trichloroethene or trichloroethane and 1,1,1-trichloroethane. Ingesting this water or the inhalation of vapors of this water constitutes an imminent health threat. The trichloroethene is classified as a Class B carcinogen.

Most of the wells in this area are "sand points" or shallow drilled wells that were terminated in the water abundant sand and gravel formations that constitute this local aquifer.

1.2 SITE HISTORY

The site was first discovered in 1984 by the Illinois Environmental Protection Agency (IEPA) during the investigation of illegal dumping by a local electroplating company. Residential wells were sampled and volatile organic compounds (VOC's) including 1,1,1-trichloroethane, trichloroethene, and 1,1-dichloroethene were detected. Additional sampling conducted by the Illinois Department of Public Health (IDPH) demonstrated widespread contamination within the shallow aquifer, indicating a much more serious problem.

On November 6, 1985, the United States EPA's Field Investigation Team conducted an inspection at the site as the result of a referral by the IEPA. The site received a Hazardous Ranking System (HRS) score of 42.24. The site was proposed for addition to the National Priorities List (NPL) in June 1988 and was officially added to the NPL as a State lead site in March 1989.

On August 9, 1989, U. S. EPA's Technical Assistance Team (TAT), as part of a 90-day study mandated by William Reilly, U. S. EPA's Administrator, collected two private well samples within the boundaries of the S. E. Rockford, NPL site located in Rockford, Illinois. The purpose of the samples were to determine if any immediate threat to human health and or the environment existed at the site.

Two residential wells were sampled by the TAT and analysis showed the presence of 1,2- dichloroethene, 1,1- dichloroethane, trichloroethene and 1,1,1- trichloroethane. The levels of the 1,2- dichloroethene exceeded the U. S. EPA's Removal Action Level (RAL) of 175 parts per billion (ppb) in both cases. Both households were immediately placed on bottled drinking water as a precautionary measure.

On October 4th through the 12th of 1989, the OSC attended a series of public meetings at the request of the IEPA and the IDPH in an attempt by the State to inform area residents of potential future cleanup activities. The OSC informed the residents who attended the meetings about the ongoing sampling effort and what the results indicated and possible remediation options.

Starting on October 3rd and continuing over two months, 118 samples were collected and a definite plume of contamination was detected. The homes in this plume were potentially at risk or their wells were presently contaminated with varying amounts and kinds of VOC contamination.

With the threat established, the OSC requested and received funds to expand the existing bottled water effort, followed by the installation of point-of-use drinking water filters in the affected residences. This provided the time needed to initiate the engineering and design work required before a full scale construction project could commence, thus bringing municipal water to the affected area.

This engineering and design was completed, along with much additional work in conjunction with the City of Rockford Water Department and the ERCS (Emergency Response Cleanup Services) contractor before actual construction was started on May 25, 1990.

1.3 THREAT

The substances identified in the groundwater of hundreds of active residential wells in the S. E. Rockford site posed a significant threat to human health, as identified in Section 300.415(b)(2) of the National Contingency Plan (NCP).

This threat included: "Actual or potential exposure to hazardous substances by nearby populations, animals or the food chain." The presence of contaminated well water in an area containing hundreds of homes utilizing this source of water, makes the threat of exposure imminent and substantial. The levels of the VOC 1,2-dichloroethane found in the two wells sampled, were both in excess of the Removal Action Level (RAL) of 175 ppb for both the cis and the trans isomer. The combined total of both isomers found initially was 556 parts per billion (ppb) and 894 ppb, respectively. Other contaminants found include 1,1,1-trichloroethane up to 397 ppb (RAL=500 ppb), trichloroethene up to 120 ppb (RAL=128) and vinyl chloride up to 122 ppb. The vinyl chloride was encountered in an adjoining area toward the end of the project and although there was no RAL for this compound at that time, the current RAL is 1.8 ppb. This low level for action is due to this compound being a Class A carcinogen.

Additional sampling was conducted by the IDPH which very closely matched the high risk area as defined by the U. S. EPA. Their sampling also duplicated similar contaminants and concentrations.

1.4 ATTEMPTS TO OBTAIN A RESPONSE BY A RESPONSIBLE PARTY

As is the case in a majority of groundwater contamination sites, an obvious Responsible Party was not apparent. The staged series of well samples that were conducted in the fall of 1989 did not identify a responsible party. Several different PROs were identified as potential sources.

1.5 ACTIONS TAKEN

A verbal approval for \$10,000 was given on September 9, 1989, to initiate the provision of bottled water to affected residences. An Action Memorandum confirming that request and requesting the expenditure of an additional \$332,000, was signed on October 25, 1989, by the Division Director. A Ceiling Increase of an additional \$1,626,500, bringing the project total to \$1,995,500, was signed by the Director on March 30, 1990. The U. S. EPA, represented by OSC Ken Theisen, commenced a removal action at the S. E. Rockford site on the September date by initiating bottled water deliveries to the initial two homes. The removal action was conducted by the Zone III Emergency Response Cleanup Services (ERCS) Contractor, I.T. Corporation out of the Cincinnati, Ohio office. The ERCS Delivery Order originally approved was for \$10,000, followed by increases as shown here:

\$10,000	09-19-89
\$50,000	10-27-89
\$50,000	12-15-89
\$120,000	02-27-90

\$1,230,000	03-30-90
\$184,000	07-06-90
\$251,000	10-19-90

The ERCS contractor provided engineering support out of various offices and contractual support for the various sub-contractors needed on site, out of their Cincinnati office. Once the project commenced, the only ERCS personnel required on site by the OSC was the project inspector.

The following sections detail the removal activities.

1.5.1 PLUME DELINEATION

Commencing on October 3, 1989, and continuing through October 5, 1989, 78 residential well samples were collected throughout the area of the S.E. Rockford Superfund site in an attempt to determine plume direction, establish concentrations and specific compounds (threat analysis), and the extent of the plume. By utilizing rapid laboratory "turnaround", analytical results was available within a one week period. The data was checked for QA/QC, plotted on maps and a new sampling episode started.

As the data became available, the extent of the plume became evident. The threat was present and widespread. With literally thousands of homes in the "expanded" Superfund area, it would have been impractical, and wasteful, to try and sample every home. As homes and areas were identified by sampling, it was more cost effective to provide an alternate water supply for everyone rather than to "fine tune" exactly which homes were or were not contaminated by expensive analytical work. By using this data as it became available and by also using the data supplied by the IDPH, there was sufficient analytical results to construct geologic contour maps. These maps were instrumental in plotting those areas at the highest risk, and where to concentrate additional sampling.

After four sampling episodes, approximately 124 samples were taken under the direction of the OSC, and a plume of contamination over two miles long and 3/4 of a mile wide had been delineated from 24th street to it's discharge point into the Rock River. A total of 287 small businesses and residences were determined to be either presently at risk from contaminated well water, or because of their position relative to the direction of groundwater flow, potentially at risk.

Additional sampling was conducted as a result of information provided by the IEPA during their Remedial Investigation work. They identified two geographically separate areas of contamination still, but in the path of groundwater flow. These were confirmed by U.S. EPA sampling to contain contaminant levels above the appropriate RAL values and were included in the project since funds were available.

1.5.2 BOTTLED WATER/ POINT-OF-USE DRINKING WATER FILTERS

As homes were sampled and the data became available, affected residents were immediately offered bottled water if they met the criteria as established by the OSC. Those criteria were based on the contents of their well water, their position relative to the direction of groundwater flow and their position relative to wells of high concentrations. The geologic contour maps discussed earlier in this report were used as a basis to make this determination. The eligible residents were asked to sign a permission slip, thus allowing the OSC, through ERCS to enter into a contractual commitment with a local vendor. Approximately 190 homes and businesses took advantage of U. S. EPA provided bottled water, with the last ones receiving it by January 1990.

Immediately upon placing the affected residences on bottled water, work was initiated to replace the bottled water supply with a point-of-use drinking water filter. There are many reasons why a long-term bottled water program was not desirable, including: winter months where bottled water can freeze on the porch while people are at work, too much or too little water delivered, and the elderly trying to carry heavy cases of bottled water. The OSC performed a cost analysis comparing bottled water to the point-of-use system and found that after three to four months it would be more cost-effective to buy and install a filter system in a residence, rather than continue the use of bottled water. The OSC then followed the same procedure as the bottled water program. The eligible residents were given a form to fill out and sign signifying their acceptance to having a filter installed in their home. The ERCS contractor arranged for the installation to be completed.

Approximately the same number of homes agreed to accept the filter systems and by the end of January 1990 all homes in the high risk area were utilizing the filter systems. This eliminated the threat posed by drinking contaminated well water and the threat posed by inhaling the vapors from contaminated water, which the bottled water did not address. No danger was posed by the inhalation of vapors to the affected residents.

As the individual homes were connected to the municipal water supply, the filters were disconnected.

1.5.3 ENGINEERING AND DESIGN

By early January 1990, the OSC determined that the permanent remedy would be the construction of water mains to supply the contaminated residences with a safe source of city water. To accomplish this task the OSC asked the ERCS contractor to find a civil engineer with construction experience. The ERCS contractor, I.T. Corporation out of Cincinnati, Ohio submitted a candidate from I.T. Corporate staff out of their Baton Rouge office. After reviewing his resume, the OSC approved this person, a Mr. Stan Campbell, to act as Project Engineer.

Several meetings were held with the Rockford Water Department to determine their specifications for city water supply improvement. Drawings were copied, valves and fire hydrants were planned, computer modeling was completed (Hardy-Cross method), surveying was contracted and carried out, buried utilities were located and various other tasks needed before a proposal could be presented to the Water utility and the City for approval were completed. All construction work was done as per the city of Rockford's specifications. When completed the water mains and associated hardware were given to the city in exchange for their agreement to maintain it; that is, to supply water and keep the system in good working order.

The OSC negotiated with the City to waive certain fees that the City normally charges, and to forgo certain permits and other requirements. Due to the emergency nature of the project and the potential for the project having to be temporarily suspended for winter if not completed, the OSC was able to convince the City Common Council to ease those restrictions. The fees included connection fees and inspections fees. The City normally charged approximately \$2,200 per connection where a water main presently existed. Since not all of the 287 eligible homes needed water main installed in front of their homes due to existing water main, this request by the OSC alone saved the project over \$200,000.

Each city street to be affected by water main construction had to have both a plan view and a cross-sectional map constructed. These drawings showed every aspect of the proposed construction and could be given along with a specifications package to the interested sub-contractors for a bid proposal.

The project was given a verbal approval by the City of Rockford's water utility in March 1990. The formal approval was given by the City's water utility on May 9th.

1.5.4 CONTRACTING

The water main bid package was prepared by the ERCS contractor I.T. Corp. The completed package was sent directly to the City of Rockford's preferred list of contractors and in addition the project was publicly advertised in a local newspaper.

A public bid opening was conducted at the Water Department in May 1990, and the successful bidders were announced at that time; subject to a careful scrutiny of the bid document. The project had been divided into two water main construction areas in an attempt to perform the work simultaneously in the two areas, thus saving time and eventually allowing various plumbing crews to work connecting the affecting homes. The low bid company, Pyramid Mercantile and Maintenance Company only bid on the largest work area and was therefore awarded the contract. The next lowest bidder, the Gregory Anderson Company (the lowest bidder on the smaller work area) was awarded the remainder of the work.

The Pyramid Company was a non-union company, while Gregory Anderson belonged to the "Laborers' International Union of North America" local #32. No labor disputes of any kind were realized during this project. A visit by the local business manager to the OSC at the projects outset, complaining about the wage scale used to bid the project did, however, have far-reaching and long-lasting effects on the national removal program.

The wage scale used to bid this project, a typical construction project, were the Service Act Agreement wages. This scale was used by the non-union company to make their bid. However, the union companies that bid on the two separate work groups had to use the more expensive Davis-Bacon or prevailing wage scale. The local union complained to their international that this type of bidding gave the non-union companies an unfair advantage over the union companies in this type of project; a project with no hazardous materials involved.

This then became a battle between the U. S. Department of Labor who agreed with the union position and the U. S. EPA who supported the present ERCS contracts which used the Service Act wage scales. Apparently the Department of Labor won out since this type of project is now mandated to use the higher wage scales.

The plumbing portion of the project was subcontracted separately. The two water main work groups were divided into 10 plumbing work groups, to allow concurrent work by more than one contractor. Two plumbing companies were awarded the 10 groups and fielded different work crews, so at any one time 3 or 4 different plumbers were working in the project area.

Other sub-contractor support for this project included a landscaper and a well driller to plug existing wells. These due

to small costs activities were not publicly bid, although they did go through the three bid process. Three bids were collected in each instance prior to awarding the work.

1.5.5 CONSTRUCTION

On May 25, 1990, one of the watermain contractors commenced building water mains or "stringing pipe". The other water main contractor commenced work the following week. Construction crews consisted of a foreman, an operator, a trenchman and on occasion an additional laborer. A typical day involved the installation of approximately 375 feet of main and the associated valves and fire hydrants also being installed. The pipe was covered as fast as it was connected together to eliminate the threat posed by an open ditch. The water main and additional "hardware" was inspected by an ERCS contractor representative who traveled from work area to work area, reporting any problems or changes in the scope of work to the OSC as they were needed.

The OSC coordinated the activities of all the crews and interacted with the portion of the community affected by the project. Most of the concerns raised by the area residents were handled over the phone, but many also required the contractors to perform some minor activities as directed by the OSC.

Once a section of water line was installed and before it could be used to carry water into the individual homes, it was chlorinated, pressure tested and a bacteriological sample taken.

If the line pressure held at 110 lb. for one hour, and if no bacteriological "count" was observed, then the water could be used for human consumption.

The plumbing of some of the older homes in the area was inadequate for the use of city water. This presented itself by the many leaks a few of the homes developed when city water was turned on. The average well pump produces approximately 45 psi while the average city line pressure in the area was about 60 psi. The OSC maintained that any leaks resulting from sub-code plumbing in individual homes would not be the responsibility of the EPA, but would be the responsibility of the homeowner.

1.5.6 RECLAMATION

A landscaping company was subcontracted to repair the lawns that were damaged in order to get the copper 3/4 inch supply lines into the homes. The work consisted of leveling, black dirt addition, and a hydro-mulching. The sub-contractor performed adequately, although there were still many citizen complaints over this activity.

1.5.7 WELL ABANDONMENT

The final phase of the project was the abandonment of existing private wells; the requirement to abandon the wells was a pre-condition of the eligible residents receiving city water. At the outset of the project each eligible property owner was asked to sign a form allowing the EPA to properly abandon each household well when the home was connected to the city water system. This condition was asked for by the City of Rockford, the State EPA and finally by the U.S. EPA Remedial Project Manager (RPM) in order to prevent continued use of the wells and prevent disposal of additional contaminants into the groundwater. The work was bid and divided into work groups and split between two different companies.

1.5.8 SITE SAFETY

Site safety was a concern for the OSC and ERCS contractor representative due to the large work area, literally involving square miles of residential streets and miles of trenches up to six feet deep. The water main contractors, the plumbing contractors and the various other contractors were responsible for their own safety programs.

As minor safety problems arose during the project they were brought to the attention of the contractors by either the OSC or the inspector and action taken immediately to correct the problem. In spite of the many man-hours worked, only very minor accidents occurred. The most serious accident involved a finger tip pinched off early in the project. The man was back to work the next day.

1.6 COMMUNITY RELATIONS

Throughout the project the OSC enjoyed excellent community relations. The local "KEN-ROCK" Community Center allowed the OSC to use their parking lot to locate his construction office, use their rest rooms, their garbage pick-up, their tables and chairs and their typists on occasion. The OSC received complete cooperation in working with the City of Rockford legal department, the water department and the Mayor's office.

In addition, the OSC kept the local media informed on a regular basis and was always receptive to the hundreds of citizen requests for assistance and information. The OSC maintained an answering machine and tried to return every call. In a written letter of recommendation from then Congresswoman Lynn Martin to the Regional Administrator Mr. Adamkus, the Congresswoman commended the OSC for his sensitivity and tact in dealing with a very sensitive subject.

Also, an area citizen's group which was instrumental in bringing the ground water contamination problem to the public's attention, was regularly kept abreast of the project's progress. Through the

chairwoman, Mrs. Irene Marshall, their help was solicited by the OSC in explaining the project to some of the more elderly citizens who were confused by the activities. Mrs. Marshall also wrote a very complementary letter to the EPA about the OSC's performance.

1.7 COST SUMMARY

SUMMARY OF DAILY ERCS CONTRACTOR EXPENDITURES AT THE "S. E. ROCKFORD, ILLINOIS " SITE 10-03-89 THRU 12-01-90.

DATE:	DAILY TOTAL:	DATE:	DAILY TOTAL
12-06-89	\$25,456.79	5-31-90	\$1,552.00
12-18-89	\$3,575.63	6-01-90	\$580.21
12-26-89	\$19,601.53	6-04-90	\$663.32
1-02-90	\$1,139.70	6-05-90	\$552.71
1-16-90	\$15,392.69	6-06-90	\$580.21
1-21-90	\$3,128.01	6-11-90	\$1,461.76
1-28-90	\$2,602.50	6-12-90	\$3,008.27
2-04-90	\$5,193.99	6-13-90	\$1,217.51
2-11-90	\$4,304.28	6-19-90	\$3,074.22
2-20-90	\$9,986.94	6-26-90	\$3,640.84
2-26-90	\$13,774.69	6-27-90	\$3,926.32
3-04-90	\$3,292.39	7-10-90	\$397,404.63
3-12-90	\$2,697.36	7-25-90	\$284,569.23
3-19-90	\$3,249.12	8-01-90	\$3,347.86
3-20-90	\$1,260.66	8-08-90	\$3,587.16
3-26-90	\$9,121.41	8-19-90	\$3,990.95
4-02-90	\$4,234.70	8-22-90	\$28,482.49
4-09-90	\$4,130.34	9-10-90	\$159,109.91
4-16-90	\$2,491.84	9-20-90	\$76,869.45
5-08-90	\$5,835.33	10-03-90	\$412,258.47
5-09-90	\$581.70	10-17-90	\$135,463.11
5-14-90	\$7,245.34	11-15-90	\$57,191.80
5-25-90	\$4,488.67	11-16-90	\$20,754.28
5-29-90	\$814.08	12-30-91	\$82,571.56
5-30-90	\$4,977.47	01-01-91	\$40,862.46

ERCS CONTRACTOR PROJECT TOTAL= \$1,887,893.66

The total is based on U. S. EPA's 1900-55 forms and can be broken down into the following categories:

PERSONNEL	\$ 147,659.25
EQUIPMENT	0
UNIT RATE MATERIALS	123.23
AT COST MATERIALS	3,990.89
SUBCONTRACTOR	1,736,120.29
TAT	<u>17,245.86</u>
PROJECT TOTAL	\$1,905,183.52

Any indication of specific costs incurred at the site is only an approximation, subject to audit and final definitization by the U. S. EPA. The OSC Report is not meant to be a final reconciliation of the costs associated with a particular site.

2.0 EFFECTIVENESS OF THE REMOVAL ACTION

The removal action effectively mitigated the immediate health threat posed to over one thousand residents residing in the S. E. Rockford area from contaminated drinking water.

2.1 RESPONSIBLE PARTIES

Refer to Section 1.4

2.2 STATE AND LOCAL AGENCIES

The City of Rockford is to be commended for the excellent cooperation the OSC received from every city department. This cooperation ranged from the Water Department to the Mayor's Office to the City Legal Department. The cooperation the OSC received from the City of Rockford was unparalleled in his dealings with various cities for this type of project. The OSC made requests from the City which cost the City many thousands of dollars in connection fees. The City also did not complain when the OSC enforced the EPA mandate in the use of "oversizing".

The Illinois Department of Public Health (IDPH) was also a very important and cooperative participant in this project. They assisted the OSC by making available to him the many sample results they had taken prior to his involvement in the project. They also continued to supplement U.S. EPA results by a continuing sampling program during the course of the project. This provided the assurance to the OSC that the plume boundaries identified before the initiation of work activities were indeed accurate. They, through their regional office located in Rockford, handled many of the citizen questions that arose during the project. Their personnel also supervised the well abandonment phase of the work, and assisted as problems arose in this area.

The local "KEN-ROCK" Community Center provided support and assistance to the OSC by providing initial office space, secretarial support on occasion, a place to park a construction office, garbage service, tables and chairs, mail drop-off, and restroom facilities.

2.3 FEDERAL AGENCIES

The U. S. EPA provided all monetary resources for the removal action. Under the direction of the OSC, the removal effectively mitigated the existing public health threats posed by conditions found at the site.

3.0 PROBLEMS ENCOUNTERED

The problems encountered at this removal action were logistical in nature. This action was not a typical removal action. This was a construction project complicated by the fact that the NPL designation affected thousands of residents in the area, whether or not their water was contaminated. A few banks and other lending institutions refused requests for loans etc. under the guise of their potential liability, as they interpreted Superfund laws. This served to incite the residents in the area and they tended to blame the U.S. EPA for this business decision on the part of the banks. The OSC was often called to explain the Agency's position on the project and to try to point residents in the right direction on where else to ask those questions and hopefully receive answers. Another "problems" was simply trying to devise ways to gather information in a site that was measured in square miles and in thousands of homes impacted, rather than in the normal terms usually associated with a typical removal action.

The weather held the potential to cause problems in a construction project of this magnitude. Construction season typically ends when the frost line becomes too deep to effectively excavate. In this case the project was completed before winter weather could stop work. If the project had not been finished, the affected residents would have had to face the winter months utilizing the point-of-use drinking water filters rather than the more desirable municipal water.

4.0 RECOMMENDATIONS

When a project of this type is anticipated it is imperative that cordial relations be established with the affected community immediately. It is important that the U.S. EPA be immediately recognized as the "good guys" by the city administration because they hold the ability to grant to the U.S. EPA things such as price concessions and many other valuable assets. Matching an OSC who has the diplomatic credentials as well as being a technically competent person, will go a long way toward a successful project, a project in which the Agency is presented in a positive manner.

It is also important to act immediately in delineating the plume of contamination and in providing bottled water followed by the less expensive (if warranted) drinking water filters. The speed in which the Agency acts is also important in positively affecting perception by the public.

Perhaps it is most important to assign projects of this sort to a senior OSC, one who has dealt with this type of project before. This "specialization" for this type of project could save time and money and is very important due to the strong community concerns that normally are associated with a contaminated groundwater supply project.

A lot of time can be wasted and a lot of analytical dollars spent taking needless samples, rather than conducting a sampling program as outlined in this report. Understanding the concept that you don't have to sample every home to delineate a plume is vital in a project of this type.

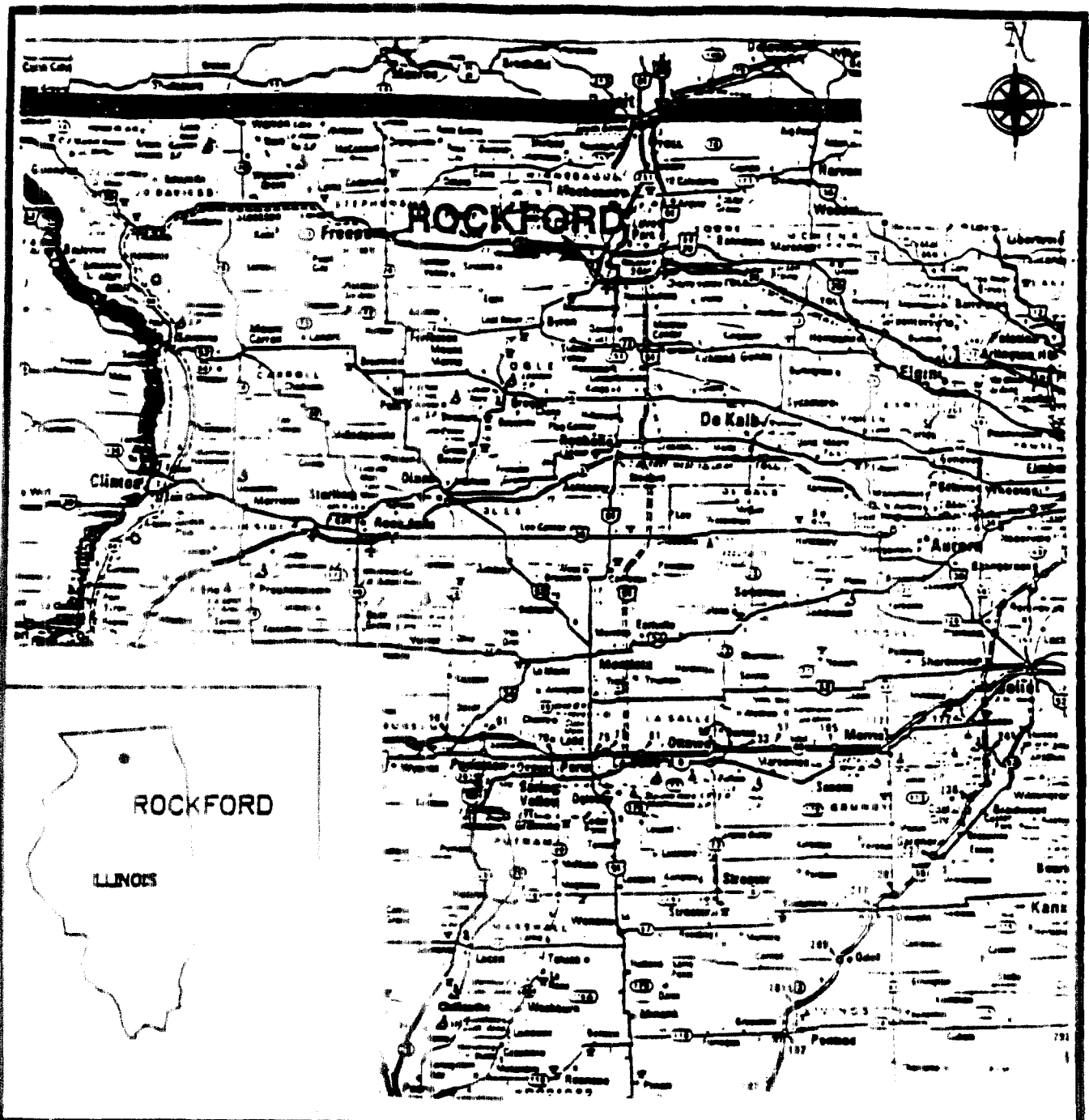


FIGURE 1
SITE LOCATION MAP
SOUTHEAST ROCKFORD
ROCKFORD, ILLINOIS

1 INCH = 20 MILES



UNITED STATES
ENVIRONMENTAL PROTECTION
AGENCY

REGION 5

DRAWN BY SCB	DATE 1-03-90	PCS # 2423
APPROVED BY R.MEHL	DATE 1-03-90	TDO # 5-8909-33

US 00342

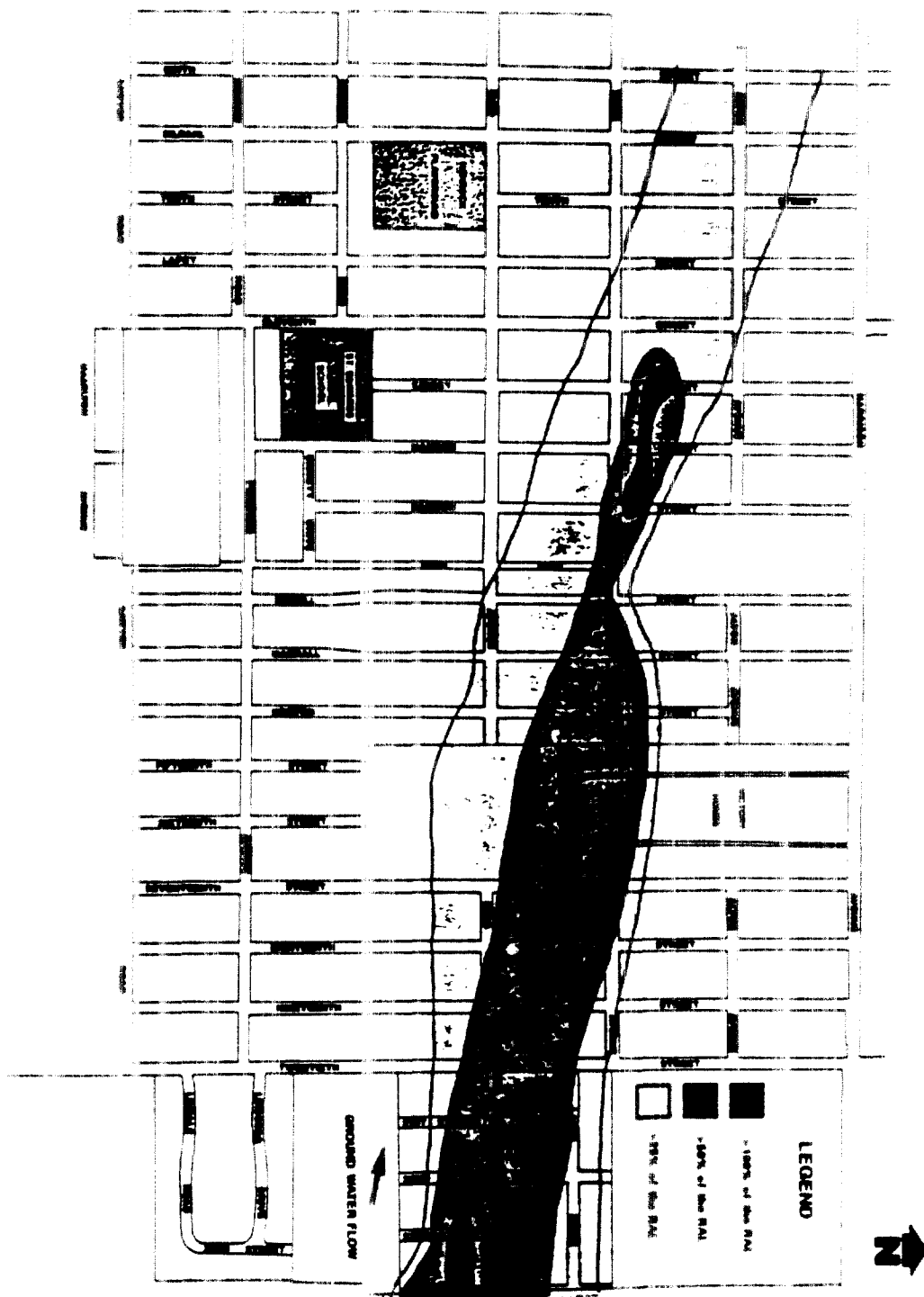


TABLE I HOOK-UP LIST

UPDATED AS OF JUNE 21, 1990

RESIDENTIAL WORK GROUP 1

(19TH - 24TH ST.)

2902-----19TH		2825-----22ND	
2904-----19TH		2826-----22ND	
2906-----19TH		2901-----22ND	
2908-----19TH		2907-----22ND	
		2911-----22ND	
2812-----20TH		2912-----22ND	
2814-----20TH		2913-----22ND	
2816-----20TH		2917-----22ND	
2817-----20TH		2918-----22ND	
2819-----20TH		2920-----22ND	
2821-----20TH		2923-----22ND	
2822-----20TH			
2907-----20TH		2819-----23RD	
2909-----20TH		2820-22---23RD	TRIPLEX
2911-----20TH		2911-----23RD	
2912-14---20TH	APT.	2913-15---23RD	APT.
2913-----20TH		2917-----23RD	
2917-----20TH		2927-----23RD	
2919-----20TH		2929-----23RD	
2922-----20TH		2931-----23RD	
2930-----20TH			
		2819-----24TH	
2816-----21TH		2821-----24TH	
2823-25---21TH	DUPLEX	2827-----24TH	
2826-----21TH		2829-----24TH	
2905-----21TH		2817-19---24TH	APT.
2910-----21TH		2921-----24TH	
2922-----21TH		2923-25---24TH	APT.
2923-----21TH		2933-----24TH	
2944-----21TH		2935-----24TH	
2817-----22ND		2610-----REED	
2822-----22ND		2626-----REED	
2824-----22ND			

*=WILL NOT BE CONNECTED TO MUNICIPAL WATER SYSTEM

RESIDENTIAL WORK GROUPS

<u>GROUP 2</u> <u>HORTON STREET</u>	<u>GROUP 3</u> <u>MARSHALL STREET</u>	<u>GROUP 4</u> <u>SEWELL STREET</u>
2734-----HORTON	2734-----MARSHALL	*2721-----SEWELL
2737-----HORTON	2737-----MARSHALL	2734-----SEWELL
2738-----HORTON	2738-----MARSHALL	2738-----SEWELL
2741-----HORTON	2743-----MARSHALL	2742-----SEWELL
2742-----HORTON	2745-----MARSHALL	
2745-----HORTON	2746-----MARSHALL	2802-----SEWELL
2746-----HORTON		2805-----SEWELL
	2801-----MARSHALL	2806-----SEWELL
2801-----HORTON	2802-----MARSHALL	2810-----SEWELL APT.
2802-----HORTON	2810-----MARSHALL	2810 1/2--SEWELL APT.
2805-----HORTON	2813-----MARSHALL	2813-----SEWELL
2806-----HORTON	2814-----MARSHALL	2814-----SEWELL
2810-----HORTON	2822-----MARSHALL	2817-----SEWELL
2811-----HORTON	2825-----MARSHALL	2821-----SEWELL
2814-----HORTON	2826-----MARSHALL	2822-----SEWELL
2817-----HORTON	2829-----MARSHALL	2826-----SEWELL
2818-----HORTON	2830-----MARSHALL	2829-----SEWELL
2822-----HORTON	2833-----MARSHALL	2833-----SEWELL
2825-----HORTON	2834-----MARSHALL	2834-----SEWELL
*2826-----HORTON	*2837-----MARSHALL	2837-----SEWELL
2833-----HORTON	2838-----MARSHALL	2838-----SEWELL
*2834-----HORTON	2845-----MARSHALL	2841-----SEWELL
2835-----HORTON	2846-----MARSHALL	2842-----SEWELL
2838-----HORTON		
2843-----HORTON	2905-----MARSHALL	2902-----SEWELL
	2906-----MARSHALL	2905-----SEWELL
2904-----HORTON	2909-----MARSHALL	2909-----SEWELL
2905-----HORTON	2914-----MARSHALL	2910-----SEWELL
2909-----HORTON	2917-----MARSHALL	
2914-----HORTON	2921-----MARSHALL	
2917-----HORTON	2922-----MARSHALL	
2918-----HORTON	2925-----MARSHALL	
2921-----HORTON	*2926-----MARSHALL	
2922-----HORTON		
2926-----HORTON		
2937-----HORTON		
2941-----HORTON		
2942-----HORTON		

*=WILL NOT BE CONNECTED TO MUNICIPAL WATER SYSTEM

RESIDENTIAL WORK GROUPS

GROUP 5

POTTER STREET

2700-----POTTER
(TAYLOR TOOL & DIE)
2813-----POTTER
2817-----POTTER
2825-----POTTER
2826-----POTTER
2829-----POTTER
2933-----POTTER
2837-----POTTER

1930-----REED
1920-----WILLS
1930-----WILLS
1935-----WILLS

GROUP 6

CANNON STREET

*2725-----CANNON	2813-----CANNON
2729-----CANNON	2817-----CANNON
2737-----CANNON	2822-----CANNON
2741-----CANNON	2825-----CANNON
2745-----CANNON	2826-----CANNON
	2829-----CANNON
2801-----CANNON	2834-----CANNON
2802-----CANNON	2837-----CANNON
2805-----CANNON	2841-----CANNON
2806-----CANNON	2842-----CANNON
2809-----CANNON	
2810-----CANNON	1822-----REED

GROUP 7

HANSON STREET

2732-----HANSON	2807-----HANSON	2827-----HANSON
2734-----HANSON	2810-----HANSON	2829-----HANSON
2736-----HANSON	2813-----HANSON	2830-----HANSON
2737-----HANSON	2816-----HANSON	2833-----HANSON
2741-----HANSON	2817-----HANSON	2834-----HANSON
2745-----HANSON	2818-----HANSON	2837-----HANSON
2746-----HANSON	2820-----HANSON	2838-----HANSON
	2821-----HANSON	*2841-----HANSON
2802-----HANSON	2826-----HANSON	2842-----HANSON
2804-----HANSON	2822-----HANSON	2845-----HANSON
2805-----HANSON	2822 1/2--HANSON	2846-----HANSON

GROUP 8

KINSEY STREET

2740-----KINSEY	2815-----KINSEY	2837-----KINSEY
2742-----KINSEY	2818-----KINSEY	2841-----KINSEY
	2821-----KINSEY	2846-----KINSEY
2803-----KINSEY	2822-----KINSEY	
2806-----KINSEY	2826-----KINSEY	1610-----WILLS
2810-----KINSEY	2829-----KINSEY	1703-----WILLS
2813-----KINSEY	2830-----KINSEY	
2814-----KINSEY	2833-----KINSEY	1621-----ALTON

*=WILL NOT BE CONNECTED TO MUNICIPAL WATER SYSTEM

RESIDENTIAL WORK GROUP 9

2715-----9TH	2805-----LAPEY	2714-----11TH
*2726-----9TH	2806-----LAPEY	2718-----11TH
2730-----9TH	2809-----LAPEY	*2725-----11TH
	2813-----LAPEY	2734-----11TH
2717-----BILDAHL	2814-----LAPEY	*2737-----11TH
2726-----BILDAHL	2817-----LAPEY	2744-----11TH
	2818-----LAPEY	
2730-----10TH	2825-----LAPEY	2802-----11TH
	2829-----LAPEY	2805-----11TH
2702-----LAPEY		2817-----11TH
2734-----LAPEY	2706-----11TH	2819-----11TH
2746-----LAPEY	2707-----11TH	2822-----11TH
2706---LAPEY APT.	2710-----11TH	2826-----11TH APT.

***=WILL NOT BE CONNECTED TO MUNICIPAL WATER SYSTEM.**